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(54) Title: LIQUID VACCINES FOR MULTIPLE MENINGOCOCCAL SEROGROUPS

(57) Abstract: Conjugated capsular saccharides from meningococcal serogroups C, W135 and Y are safe and immunogenic in humans when combined in a single dose. This effect is retained when a conjugated capsular saccharide from serogroup A is added. These conjugated antigens can be stably combined in a single aqueous dose without the need for lyophilisation. Broad protection against serogroup B infection can be achieved by using a small number of defined polypeptide antigens. These polypeptide antigens can be combined with the saccharide antigens without loss of protective efficacy for any of the five serogroups. Efficacy is retained even if a Hib conjugate is added. The efficacy of a serogroup W135 conjugate is enhanced by addition of protein antigens derived from a serogroup B strain. Addition of a Hib conjugate to meningococcal conjugates enhances the overall activity against meningococcus serogroup W135.